AMENDMENT UNDER 37 C.F.R. § 1.116

Application No.: 10/516,463

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A rubber composition which comprises, per 100 parts by mass of a polymer, 10 to 200 parts by mass of silica and 1 to 30 parts by mass of a silane compound having sulfur atom represented by average structural formula (I):

$$({\rm R^{1}O})_{3-p} ({\rm R^{2}})_{p} {\rm Si-R^{3}-S_{m}-R^{4}-S_{m}-R_{3}-Si(R^{2})_{p}} ({\rm OR^{1}})_{3-p} \quad \cdots (I)$$

wherein R¹ and R² each represent a hydrocarbon group having 1 to 4 carbon atoms, R³ represents a divalent hydrocarbon group having 1 to 15 carbon atoms, **p** represents an integer of 0 to 2, **m** represents a number of 1 to or greater and smaller than 2, which may be an average of numbers, and R⁴ represents a divalent functional group represented by one of following general formulae (III) to (IV):

$$R^6 - S_x - R^7 \qquad \qquad \cdots (III)$$

$$R^8 - S_y - R^9 - S_z - R^{10}$$
 ... (IV)

wherein R^6 to R^{10} represents a linear or branched divalent hydrocarbon group having 1 to 20 carbon atoms, a divalent aromatic group or a divalent organic group having a hetero atom which is not sulfur atom or oxygen atom, R^6 to R^{10} may represent a same group or different groups, and \mathbf{x} , \mathbf{y} and \mathbf{z} each represent a number of 2 or greater and smaller than 4, which may be an average of numbers.

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2. (original): A rubber composition according to Claim 1, wherein **m** represents 1 in average structural formula (I) representing the silane compound having sulfur atom.

- 3. (original): A rubber composition according to Claim 1, wherein x, y and z each represent a number of 2 or greater and 3 or smaller, which may be an average of numbers, in general formulae (III) and (IV) representing the divalent functional group.
- 4. (original): A rubber composition according to Claim 1, wherein R⁴ represents a divalent functional group represented by general formula (IV) in average structural formula (I) representing the silane compound having sulfur atom.
- 5. (original): A rubber composition according to Claim 1, wherein, in average structural formula (I) representing the silane compound having sulfur atom, R⁴ represents a divalent functional group represented by general formula (IV) in which R⁸, R⁹ and R¹⁰ each represent hexylene group.
- 6. (original): A rubber composition according to Claim 1, wherein a purity of the silane compound having sulfur atom is 60% or greater at a time when the silane compound having sulfur atom is mixed to form the rubber composition.
- 7. (previously presented): A rubber composition according to Claim 1, wherein, at a time when the silane compound having sulfur atom is mixed to form the rubber composition, a

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content of silane compounds having sulfur atom and three or more silicon atoms in one molecule is 30% by mass or smaller of the rubber composition.

- 8. (previously presented): A rubber composition according to Claim 1, wherein a BET surface area of the silica is 40 to 350 m²/g.
- 9. (previously presented): A rubber composition according to Claim 1, wherein the polymer is a diene-based rubber.
- 10. (previously presented): A tire which comprises a member comprising a rubber composition described in Claim 1.
 - 11. (original): A tire according to Claim 10, wherein the member is a tire tread.
- 12. (previously presented): A rubber composition according to Claim 2, wherein, at a time when the silane compound having sulfur atom is mixed to form the rubber composition, a content of silane compounds having sulfur atom and three or more silicon atoms in one molecule is 30% by mass or smaller of the rubber composition.
- 13. (currently amended): A rubber composition which comprises, per 100 parts by mass of a polymer, 10 to 200 parts by mass of silica and 1 to 30 parts by mass of a silane compound having sulfur atom represented by average structural formula (I):

$$(R^1 {\rm O})_{3-p} (R^2)_p {\rm Si} - R^3 - {\rm S}_m - R^4 - {\rm S}_m - R_3 - {\rm Si} (R^2)_p ({\rm OR}^1)_{3-p} \quad \cdots (I)$$

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wherein R¹ and R² each represent a hydrocarbon group having 1 to 4 carbon atoms, R³ represents a divalent hydrocarbon group having 1 to 15 carbon atoms, **p** represents an integer of 0 to 2, **m** represents a number of 1 to or greater and smaller than 2, which may be an average of numbers, and R⁴ represents a divalent functional group represented by the following general formula (II):

$$S-R^5-S$$
 ... (II)

wherein R^5 represents a decylene group, phenylene group or methylphenylethylene group, R^5 may represent a same group or different groups, and \mathbf{x} , \mathbf{y} and \mathbf{z} each represent a number of 1 or greater and smaller than 4, which may be an average of numbers.

- 14. (previously presented): A rubber composition according to Claim 13, wherein **m** represents 1 in average structural formula (I) representing the silane compound having sulfur atom.
- 15. (previously presented): A rubber composition according to Claim 13, wherein a purity of the silane compound having sulfur atom is 60% or greater at a time when the silane compound having sulfur atom is mixed to form the rubber composition.
- 16. (previously presented): A rubber composition according to Claim 13, wherein, at a time when the silane compound having sulfur atom is mixed to form the rubber composition, a content of silane compounds having sulfur atom and three or more silicon atoms in one molecule is 30% by mass or smaller of the rubber composition.

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17. (previously presented): A rubber composition according to Claim 13, wherein a BET surface area of the silica is 40 to $350 \text{ m}^2/\text{g}$.

- 18. (previously presented): A rubber composition according to Claim 13, wherein the polymer is a diene-based rubber.
- 19. (previously presented): A tire which comprises a member comprising a rubber composition described in Claim 13.
- 20. (previously presented): A tire according to Claim 19, wherein the member is a tire tread.
- 21. (previously presented): A rubber composition according to Claim 14, wherein, at a time when the silane compound having sulfur atom is mixed to form the rubber composition, a content of silane compounds having sulfur atom and three or more silicon atoms in one molecule is 30% by mass or smaller of the rubber composition.